

REMARKS

Claims 1-10 and 13-27 are pending in the present application. In the Office Action mailed June 10, 2009, the Examiner provisionally rejected claims 1-10 and 13-27 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 11/465,908. The Examiner next provisionally rejected claims 1-10 and 13-27 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 11/465,947. Claims 1-10 and 13-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gordon et al. (USP 5,661,774) in view of Ikeda (JP 2001-87254).

Claims 13 and 14 have been amended to depend from claim 8.

Obviousness-Type Double Patenting Rejection

The Examiner provisionally rejected claims 1-10 and 13-27 based on two copending Applications. Claims 1-10 and 13-27 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 11/465,908, and claims 1-10 and 13-27 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 11/465,947.

The two double patenting rejections of claims 1-10 and 13-27 are wholly inadequate and Applicant requests withdrawal thereof. Nowhere has the Examiner provided any sort of analysis in support of the double patenting rejections other than a blanket paragraph that is intended to cover rejection of all of claims 1-10 and 13-27 with respect to claims 1-23 of copending Application No. 11/465,908, and a blanket paragraph that is intended to cover rejection of all of claims 1-10 and 13-27 with respect to claims 1-25 of copending Application No. 11/465,947.

MPEP §804(II)(B)(1) states that a factual inquiry should be conducted regarding double patenting rejections. The factual inquiry defined therein is summarized as follows:

- (A) Determine the scope and content of a patent claim relative to a claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.
MPEP §804(II)(B)(1) (emphasis added).

MPEP §804(II)(B)(1) also states that any obviousness-type double patenting rejection should make clear:

(A) The differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and

(B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue >is anticipated by, or< would have been an obvious variation of >,< the invention defined in a claim in the patent. *Id.* (emphasis added).

The Examiner has fallen well short of these requirements in making the double patenting rejections. Nowhere has the Examiner made a clear claim-to-claim comparison between a claim in the patent (i.e., the pending application(s) in this case) and a claim in the application, or made clear any differences therebetween. A single paragraph generally alleging that claims 1-10 and 13-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of Application No. 11/465,908 (or Application No. 11/465,947) in no way rises to the level of a claim-to-claim (i.e., invention-to-invention) analysis as mandated by MPEP §804(II)(B)(1).

Further, the Examiner did not set forth reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by the invention defined in a claim in the patent as mandated by MPEP §804(II)(B)(1). That is, the Examiner did not set forth the proper claim-by-claim reasoning why one of skill in the art would conclude that each claim of the application was anticipated by a respective claim in the reference patent (i.e., the pending application(s)). Thus, the Examiner has not properly established a reasonable basis for a prima facie case of obviousness-type double patenting as required by the MPEP.

A recent holding of the Board of Patent Appeals and Interferences, while not binding, is consistent with the requirements of the MPEP as articulated above. In *Appeal 2007-2162*, the Board determined that a similar obviousness double patenting rejection was inadequate and fell well short on the merits. *See Appeal 2007-2162*, 10/19/07, pgs. 9-10 (attached). In that case, the Board went out of its way (the issue was moot) to state that the “Examiner’s mere assertion in the rejection without any supporting analysis whatsoever hardly provides a reasonable basis for a prima facie case of obviousness-type double patenting.” *Id.* at pg. 10. The Board further stated that “the Examiner did not specifically identify the differences between the claims of the ‘506 application and the claims of the present application, let alone reasonably explain why these perceived differences would have been obvious to one of ordinary skill in the art.” *Id.* (emphasis added).

It is clear that the Examiner’s rejection of claims 1-10 and 13-27 fell well short of the MPEP requirements for setting forth an obviousness-type double patenting rejection. Nowhere has the Examiner identified a claim in the co-pending applications to conduct a well-reasoned

comparison with a claim in the above-captioned application, and nowhere has the Examiner identified the reasons why any of the claims of either co-pending application would be unjustifiably extended by any claims of this application. For these reasons alone, Applicant requests withdrawal of the double patenting rejections. At a minimum, Applicant respectfully submits that any subsequent office action that is based on any double patenting rejection cannot be made Final since the Examiner has failed to satisfy the burden required to make such a rejection.

Rejection under 35 U.S.C §103(a)

Claims 1, 8, 16, 19, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gordon et al. in view of Ikeda. Although Applicant disagrees with the Examiner's interpretation of the references, Applicant has amended claims 1, 8, 19, and 24 to clarify the claimed subject matter. Thus, as will be illustrated, nowhere does Gordon et al., Ikeda, or a combination thereof teach or suggest that called for in claims 1, 8, 16, 19, and 24.

Gordon et al. teaches "an improved power supply that is useful in connection with dual energy X-ray systems." *Gordon et al.*, Col. 1, lns. 13-16. "CT scanning system 120 includes an annular shaped rotating platform, or disk, 124 disposed within a gantry support 125 for rotation about a rotation axis 127 (shown in FIG. 3) that is preferably parallel to the direction of travel of the baggage 112, such direction of travel being indicated by arrow 114." *Id.* at col. 6, lns. 33-38. "Rotating disk 124 defines a central aperture 126 [sic – aperture 126 is not shown in Figures of Gordon et al.] through which conveyor system 110 transports the baggage 112." *Id.* at col. 6, lns. 43-45. "Disk 124 rotates about its rotation axis 127 thereby transporting X-ray source 128 and detector array 130 in circular arcs about baggage 112 as the baggage is continuously linearly transported through central aperture 126 by conveyor system 110 . . ." *Id.* at col. 7, lns. 3-7.

"Filter 262 is a preferably flat disk that is disposed proximal to X-ray tube 128 for rotation within the beam generated by X-ray tube 128." *Id.* at col. 13, lns. 15-17. Filter 262 is a flat metal disk with six pie shaped segments, with three of the segments 270 formed from relatively thick material, and three segments 272 formed from relatively thin material. *Id.* at col. 13, lns. 23-33 (emphasis added). "Segments 270 and 272 are alternately disposed so that each of the thick segments 270 is adjacent to two of the thinner segments 272, and vice versa." *Id.* at col. 13, lns. 37-39. Filter 262 rotates to dispose segments 270 and 272 alternately in the beam. *Id.*, Col. 13, lns. 40-44. The filters 270, 272 are flat segments of filter 262 and Figures 5, 7, and 9

illustrate filter 262, wherein radial lines of delineation segment filter 262 into flat segments 270, 272. *Id.* at FIGS. 5, 7, 9.

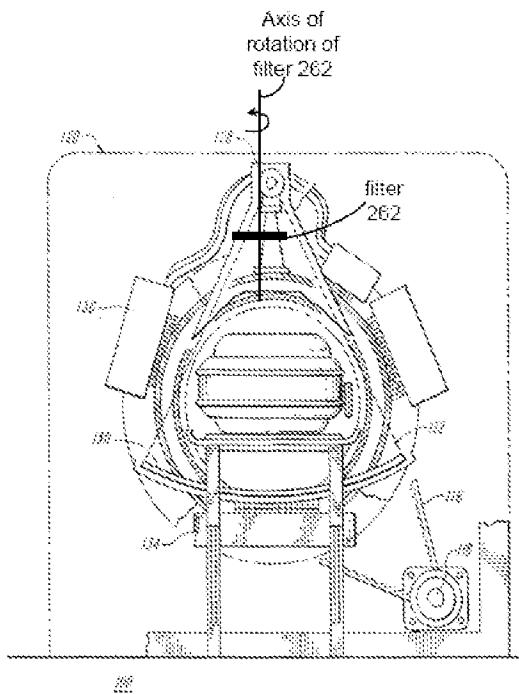
Gordon et al. teaches:

In the illustrated embodiment, filter 262 preferably rotates 120° for every oscillation of the X-ray beam, and the initial position of filter 262 is adjusted so that one of the thicker sections 270 is disposed in the beam between the tube 128 and the baggage 112 (shown in FIG. 1) when tube 128 generates the high energy beam (i.e., when the voltage level between node A and system ground equals V₁), and one of the thinner sections 272 is disposed in the beam when tube 128 generates the low energy beam (i.e., when the voltage level between node A and system ground equals V₂). *Id.* at col. 13, lns. 57-66.

and:

In the preferred embodiment, the rotation of filter 262 (and therefore the oscillation of the X-ray beam) is synchronized to the rotation of rotating disk 124 of the baggage scanner (shown in FIGS. 1-3), so that the X-ray beam periodically changes between the high and low energy levels and back to the high energy level (one cycle or period of the waveform) N times for every 360° rotation of disk 124, where N is an integer. *Id.* at col. 14, lns. 5-12.

Thus, Gordon et al. teaches a baggage scanning system that includes an x-ray source 128 and a rotating disk 124 having disposed thereon a detector array 130 that rotates about rotation axis 127. Gordon et al. further teaches a flat filter/disk that is disposed proximately to x-ray tube 128 for rotation within x-rays emitting therefrom and may be synchronized with rotation of rotating disk 124. Clearly, referring to FIG. 1 of Gordon et al. and based on the teachings thereof, in order to dispose filter sections 270 and 272 of filter 262 “in the beam between the tube 128 and the baggage 112,” the rotation of filter 262 is about an axis of rotation that is not orthogonal, perpendicular, or transverse to an axis that passes from x-ray tube 128 to baggage 112. Instead, as illustrated below in annotated FIG. 2 and based on the teachings of Gordon et al., filter 262 must be positioned between x-ray tube 128 such that the rotation of filter 262 is parallel with the axis that passes from x-ray tube 128 to baggage 112 in order for the x-ray beam to pass through filter sections 270 and 272.



Annotated FIG. 2 of Gordon et al.

The Examiner admitted, “Gordon et al. do not explicitly teach a hub structure with the filter segments extending from the hub and where the filter segments are perpendicular to each other along the hub.” *Office Action*, 06/10/09, pg. 6. The Examiner relied on Ikeda for teaching filters 401a-401d that are rotatably supported by a motor 501 “and connected to a hub or filter support 402 with a generally circular cross-section and the filters are arranged perpendicular to each other on the filter support (fig. 4, [0049]).” *Id.* The Examiner alleged that “[t]he hub or filter support is configured to rotate about an axis of rotation orthogonal to x-ray emitting from the x-ray source.” *Id.* at pg. 7. However, the Examiner is incorrect in this allegation.

Ikeda teaches that “[t]he present invention relates to X-ray image diagnostic apparatuses having an attached filter” and “particularly to techniques effective when applied to imaging of soft tissue using higher-energy x-rays.” *Ikeda JP 2001-87254* (English translation), pg. 3, lns. 4-10. As will be illustrated, Ikeda teaches an x-ray imaging device in FIG. 3 and a filter for use therewith in FIG. 4. “As shown in FIG. 3, the X-ray source 106 is housed in the hood 304, and the X-ray emission port 305 is disposed adjacent to the illumination surface for the X-ray beam in Embodiment 1.” *Id.* at pg. 18, lns. 26-29. “X-rays generated at the X-ray source 106 pass through the X-ray emission port 305 and are directed to the subject to be measured (not shown).” *Id.* at pg. 18, lns. 29-32. “Moreover, the attached filter driving means 301 is disposed adjacent to

the X-ray emission port 305 and is configured to have the attached filter unit 303 disposed on the axle 302 projecting from the attached filter driving means 301.” *Id.* at pg. 18, ln. 32 - pg. 19, ln. 4. “This configuration causes the attached filter unit 303 to be disposed within a path of the X-ray beam emitted through the X-ray emission port 305.” *Id.* at pg. 19, lns. 4-7 (emphasis added).

Ikeda illustrates that, “[a]s can be clearly seen from FIG. 4, the attached filter unit 303 in Embodiment 1 is secured to the attached filter support 402 by one end of each attached filter 401a – 401d so that the four attached filters 401a – 401d are arranged in a planar configuration.” *Id.* at pg. 18, lns. 17-22 (emphasis added).

Thus, as is evident in FIGS. 3 and 4 and the supporting text, Ikeda teaches an x-ray imaging device in FIG. 3 that includes filter 303 positioned on an axle 302. Filter 303 is disposed within a path of an x-ray beam emitted through x-ray emission port 305 toward a subject (i.e., in an upwards direction from x-ray emission port 305 through filter 303 of FIG. 3). Further, Ikeda teaches that filter unit 303 includes filters 401a – 401d, which are arranged in a planar configuration. As such, it is evident that x-rays emit from emission port 305 in a direction that is parallel with axle 302 in order to pass through the four attached filters 401a – 401d that are arranged in a planar configuration.

Accordingly, the Examiner is incorrect in the allegation that “[t]he hub or filter support is configured to rotate about an axis of rotation orthogonal to x-ray emitting from the x-ray source.” *See Office Action*, supra at pg. 7 (emphasis added). Clearly, the rotation axis of filter 303 and filters 401a – 401d is parallel to x-rays emitting from the x-ray source. As such, that taught in Ikeda has not been correctly interpreted by the Examiner.

Thus, Ikeda teaches filters 401a – 401d rotate about an axis of rotation that is parallel to x-rays emitted from port 305, and orthogonal to the planar arrangement of filters 401a – 401d. And, as summarized above, Gordon et al. teaches a flat filter/disk 262 that is disposed proximately to x-ray tube 128 and has an axis of rotation that is parallel with the axis of rotation that passes from x-ray tube 128 and to baggage 112.

Accordingly, in combination and at most, Gordon et al. and Ikeda teach the filter of Ikeda positioned within the imaging system of Gordon et al. such that x-rays emitted from x-ray tube 128 pass through the planar filter elements 401a – 401d of Ikeda, which rotate about an axis of rotation that is parallel to the axis that passes from x-ray tube 128 toward detector array 130 of Gordon et al.

As such, nowhere does Gordon et al. in combination with Ikeda teach or suggest the claimed subject matter. Nowhere does the combination teach or suggest an axis of rotation

between the first position and the another position is in a direction transverse to the projection of HF electromagnetic energy beams from the HF electromagnetic energy source toward the subject as called for in claim 1. Nowhere does the combination teach or suggest a central axis of the path of rotation of a hub about a center of the hub that is orthogonal to a HF electromagnetic energy beam as called for in claim 8. Nowhere does the combination teach or suggest positioning a second filter in a single projection path by rotation of a hub about an axis of rotation that is transverse to an axis of rotation of the hub as called for in claim 16. Nowhere does the combination teach or suggest a computer programmed to rotate a hub about an axis that is perpendicular to a first beam of electromagnetic energy as called for in claim 19. Nowhere does the combination teach or suggest a hub configured to rotate about an axis of rotation coincident with a center of the hub, wherein the axis of rotation is orthogonal to x-rays emitting from an HF electromagnetic energy source as called for in claim 24.

Accordingly, that called for in claims 1, 8, 16, 19, and 24 is not taught or suggested in the art of record. As such, Applicant requests withdrawal of the rejection of claims 1, 8, 16, 19, and 24 and the claims that depend therefrom.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-10 and 13-27.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 07-0845.

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